

**BARTILLA BOOSTER PUMP STATION REPAIR**  
COMMANDER'S EMERGENCY RESPONSE PROGRAM  
**NINEWA GOVERNORATE, IRAQ**

**SUSTAINMENT ASSESSMENT**

**SIGIR PA-07-109**  
**OCTOBER 23, 2007**

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## SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

October 23, 2007

MEMORANDUM FOR COMMANDING GENERAL, MULTI-NATIONAL FORCES-  
IRAQ,  
COMMANDER, JOINT CONTRACTING COMMAND-  
IRAQ/AFGHANISTAN  
COMMANDER, GULF REGION DIVISION, U.S. ARMY  
CORPS OF ENGINEERS  
DIRECTOR, IRAQ TRANSITION ASSISTANCE OFFICE

SUBJECT: Report on Commander's Emergency Response Program for Bartilla Booster  
Pump Station Repair, Ninewa Governorate, Iraq (Report Number SIGIR PA-  
07-109)

The Office of the Special Inspector General for Iraq Reconstruction is assessing projects funded under the Commander's Emergency Response Program to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted.

We are providing this report for your information and use. It addresses the current status of the Bartilla Booster Pump Station Repair, Ninewa Governorate, Iraq. The assessment was made to determine whether the project was operating at the capacity stated in the original contract.

The comments received from the Commander, Gulf Region Division in response to a draft of this report addressed the recommendation, and the actions planned should address the issues we identified. As a result, comments to this final report are not required.

We appreciate the courtesies extended to our staff. If you have any questions please contact Mr. Brian Flynn at [brian.flynn@iraq.centcom.mil](mailto:brian.flynn@iraq.centcom.mil) or at DSN 318-343-9244. For public or congressional queries concerning this report, please contact SIGIR Congressional and Public Affairs at [publicaffairs@sigir.mil](mailto:publicaffairs@sigir.mil) or at (703) 428-1100.

Stuart W. Bowen, Jr.  
Inspector General

# Special Inspector General for Iraq Reconstruction

SIGIR PA-07-109

October 23, 2007

## Bartilla Booster Pump Station Repair Commander's Emergency Response Program Ninewa Governorate, Iraq

### Synopsis

**Introduction.** The Office of the Special Inspector General for Iraq Reconstruction is assessing projects funded under the Commander's Emergency Response Program to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted. The overall objective was to determine whether projects are operating at the capacity stated in the original contract or task order. We conducted this limited scope assessment in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector.

The project objective was to repair the booster pump station to provide potable water, at a rate of 200 cubic meters per hour, to the residents of Bartilla, in the Ninewa governorate. The contract included specific requirements that materials and equipment were to be replaced with equipment that met the original design intent of the facility. In addition, where new material or equipment was specified, new items should adhere to British or the equivalent international codes and standards. On 31 August 2006, a firm-fixed-fee contract of \$237,500 for the booster pump station repair was awarded to a local contractor.

**Project Assessment Objectives.** The objective of this project assessment was to provide real-time relief and reconstruction project information to interested parties to enable appropriate action, when warranted. Specifically, the Special Inspector General for Iraq Reconstruction determined whether the project was operating at the capacity stated in the original contract. To accomplish the objective, the Special Inspector General for Iraq Reconstruction determined if the project was at full capability or capacity when accepted by the United States government, when transferred to Iraqi operators, and during the site inspection on 19 September 2007.

**Conclusions.** Our assessment of repairs at the Bartilla Booster Pump Station included a review and analysis of the contract, related contract documentation, contract Statement of Work, design package (drawings and specifications), quality control and quality assurance reports, construction progress photos, final situation report, invoices, submittals, and closeout documents.

Because of increased insurgent activity in the Mosul area during the two weeks that the inspection team was there, escort to the Bartilla Booster Pump Station by the private security contractor was delayed for five days. When an escort finally could be provided, the escort limited the assessment team to an expedited site visit. The assessment team observed that there was no electrical power available at the time of the site visit, and the pump station was not operating. The assessment team could not communicate with the two Iraqis at the station; consequently, the Special Inspector General for Iraq Reconstruction could not determine the reason the station was not operational on the day

of the site visit. Further, the assessment team could not determine the post-turnover equipment operations and maintenance management and facility/building maintenance practices by the Directorate of Ninewa Water personnel.

The United States Army Corps of Engineers documentation confirmed that contract provisions were met and that the Bartilla Booster Pump Station was operational at the time of turnover to the Directorate of Ninewa Water. The documentation also showed that the contractor and the United States government performed adequate quality management oversight, which enforced contract provisions and ensured construction quality and completeness.

**Recommendations.** The Special Inspector General for Iraq Reconstruction recommended that the Commander, Gulf Region North, send representatives to visit the site when security situations become more stable to determine why the booster pump station was not operational on 19 September 2007.

**Management Comments.** The Commander, Gulf Region Division concurred with the recommendation agreeing to have Gulf Region North representatives visit the site when security conditions warrant. The Special Inspector General for Iraq Reconstruction appreciates the prompt response from Gulf Region Division and agreed with the suggested corrective action.

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# **Introduction**

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## **Objective of the Project Assessment**

The Office of the Special Inspector General for Iraq Reconstruction is assessing projects funded under the Commander's Emergency Response Program to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted. The objective of this project assessment was to determine whether the project was operating at the capacity stated in the original contract. To accomplish this objective, we determined if the project was at full capability or capacity when accepted by the U.S. government, when transferred to Iraqi operators, and during our site inspection on 19 September 2007.

## **Pre-Site Assessment Background**

### **Contract, Costs and Payments**

Contract W917BE-06-C-0049 was awarded on 31 August 2006 to a local contractor. The contract was a firm fixed fee contract in the amount of \$417,600. The contract contained three contract line item numbers: Al Jadedda Pump Station in the amount of \$90,500; Al Sadeq Pump Station in the amount of \$89,600; and Bartilla Booster Pump Station in the amount of \$237,500.

The contract contained one modification. Modification P00001, dated 23 October 2006, deleted line items in the Bill of Quantities for the Bartilla Booster Pump Station, and added items to the Statement of Work (SOW). The deleted and added line items resulted in no additional charge to the U.S. government.

Based on information provided by the contractor, the project started in September 2006 and was completed in May 2007. By reference, the Federal Acquisition Regulation 52.246-21, Warranty of Construction clause was incorporated into the contract, and the standard one year from date of acceptance by the government construction warranty was applicable.

### **Statement of Work**

The SOW required the repair of the Bartilla Booster Pump Station. Work will involve but not be limited to the following:

- Maintain the anti-hummer system;
- Maintain the building's roof, walls, windows, doors, and painting on the exterior and interior;
- Demolish and recast the walkways around the electrical building;
- Construct a complete water closet;
- Supply, install, test, and operate a new 2 meter(m)x 2m x 2m septic tank;
- Supply, install, test, and operate the hand-operated 3-ton crane for the ground storage tank with 12m reach;
- Construct a new manager's office;
- Construct a 2m high fence from concrete blocks and cement plaster;
- Maintain and operate the main electrical panel; and

- Maintain the elevated steel tank.

The contract's SOW included specific requirements and stated that materials and equipment will be replaced with equipment that meets the original design intent of the facility. In addition, where new material or equipment has been specified, new items should adhere to the British or the equivalent international codes and standards.

### **Project Objective, Pre-Construction Description**

The description of the facility (pre-construction) was based on information obtained from the contract and the U. S. Army Corp of Engineers (USACE) project file. The objective of the project was to repair the booster pump station, located in the Ninewa Governorate, and provide potable water at a rate of 200 cubic meters per hour ( $\text{m}^3/\text{hr}$ ) to the residents of Bartilla.

The Bartilla Booster Pump Station, at the time of the site assessment, was not operating. However, based on our review of the project file, provided by the USACE, the Bartilla Booster Pump Station had been repaired and should have been operational.

### **Project Design**

The contract's SOW required the contractor to replace the materials and equipment with equipment that met the original design intent of the facility. In addition, where new material or equipment was specified, new items should adhere to British or equivalent international codes and standards.

The design provided to the assessment team by the contractor contained the following drawings for the Bartilla Booster Pump Station:

- architectural
- structural
- mechanical (heating, ventilation, and air conditioning [HVAC])
- electrical (electric and lighting)
- sanitary (water closet and septic tank)

The civil drawings for the Bartilla Booster Pump Station included details showing the utility systems (water, sewer, electrical) for the site. The design package also included the mechanical design, featuring ceiling fans; the electrical distribution-system design included outlets and power switches.

Based on our review of the design submittal, the designs were basic and not detailed enough for the renovation and new construction work.

## **Site Progress During Construction**

Throughout the Bartilla Booster Pump Station project, numerous progress photographs were provided. We reviewed and subsequently relied on selected USACE photographs to document examples of construction performance completed in accordance with SOW requirements before the project was turned over to the Iraqi's in May 2007.



Site Photo 1 documents the anti-hummer system before any maintenance occurred, and Site Photo 2 shows the maintenance performed by the contractor on the anti-hummer system.



**Site Photo 1. Anti-Hummer system before maintenance (Photo courtesy of USACE)**



**Site Photo 2. Anti-Hummer system after maintenance (Photo courtesy of USACE)**

Site Photo 3 documents the general maintenance performed inside the booster pump station building and Site Photo 4 displays the general maintenance performed on the exterior of the booster pump station building, including the roof, walls, windows, doors, and exterior painting.



**Site Photo 3. General maintenance performed inside the Bartilla Booster Pump Station pump room (Photo courtesy of USACE)**



**Site Photo 4. General maintenance performed on the exterior of the Bartilla Booster Pump Station (Photo courtesy of USACE)**



Site Photo 5 shows the recast walkway which replaced the old walkway that was demolished.



**Site Photo 5. New recast walkway (Photo courtesy of USACE)**

Site Photo 6 displays the new construction of a water closet at the Bartilla Booster Pump Station, and Site Photo 7 documents the completed construction of the water closet.



**Site Photo 6. Construction of a water closet (Photo courtesy of USACE)**



**Site Photo 7. Completed construction of water closet (Photo courtesy of USACE)**

The excavation of the septic tank is shown in Site Photo 8, and Site Photo 9 documents the testing of the 2mx2mx2m septic tank.



**Site Photo 8. Excavation of septic tank (Photo courtesy of USACE)**





**Site Photo 9. Septic tank testing (Photo courtesy of USACE)**

Site Photo 10 shows the installation of the hand-operated 3-ton crane for the ground storage tank.



**Site Photo 10. Installation of the new 3-ton crane (Photo courtesy of USACE)**

Site Photo 11 documents the construction that occurred for the manager of operations' new office.



**Site Photo 11. Construction of the manager of operations' new office (Photo courtesy of USACE)**

The construction of the two-meter high fence, made from concrete blocks and cement plaster, is shown in Site Photo 12. Site Photo 13 documents the completed construction of the two-meter high fence around the perimeter of the Bartilla Booster Pump Station.



**Site Photo 12. Construction of security wall (Photo courtesy of USACE)**





**Site Photo 13. Newly constructed security wall (Photo courtesy of USACE)**

Site Photo 14 shows the pump house control panel after receiving general maintenance.



**Site Photo 14. Pump house control panel after maintenance (Photo courtesy of USACE)**



Site Photo 15 documents the elevated steel tank after receiving general maintenance.



**Site Photo 15. Elevated steel water tank after maintenance (Photo courtesy of USACE)**

## **Site Assessment**

On 19 September 2007, SIGIR performed an on-site assessment of the Bartilla Booster Pump Station project. We were accompanied to the site by the USACE, GRN Engineer. Due to security reasons, we had to perform an expedited assessment; however, we observed that the Bartilla Booster Pump Station was not operating. We were unable to communicate with the two Iraqi individuals at the station; consequently, we could not determine the reason the station was not operating on the day of our visit.

### **General Observations**

All work completed appeared to meet the SOW requirements. The booster pump station was designed so that the quality of the pumped water would be maintained and that the operation of the booster pump station would not cause water quality problems elsewhere in the water system. In addition, the booster pump station ensures water system adequacy, reliability, and compatibility with existing and future facilities. The booster pump station should be secure from vandalism, trespass, and severe weather conditions; be adequately insulated; provide heating to prevent freezing during winter; provide for adequate ventilation to prevent overheating in the summer; provide adequate drainage; and provide access to allow for replacement and repair of the equipment.

During our site visit, we observed that the following SOW requirements were completed:

- All rubble and debris was cleared and removed;

- General maintenance was performed for the interior booster pump room building as shown;
- Exterior painting and general maintenance was performed on the building's roof, walls, windows, doors;
- Walkways around the electrical building were recast;
- Hand-operated three-ton crane for the ground storage tank had been installed;
- A 2m-high fence made of concrete blocks and cement plaster had been constructed;
- Overall maintenance was performed on the control panel; and
- General maintenance of the elevated steel tank was performed.

During our site visit, we did not detect any instances of incomplete maintenance or construction.

## Conclusions

SIGIR's assessment of repairs at the Bartilla Booster Pump Station included a review and analysis of the contract, related contract documentation, contract Statement of Work, design package (drawings and specifications), quality control and quality assurance reports, construction progress photos, final situation report, invoices, submittals, and closeout documents.

Because of increased insurgent activity in the Mosul area during the two weeks that the inspection team was there, escort to the Bartilla Booster Pump Station by the private security contractor was delayed for five days. When an escort finally could be provided, the escort limited the assessment team to an expedited site visit. The assessment team observed that there was no electrical power available at the time of the site visit, and the pump station was not operating. The assessment team could not communicate with the two Iraqis at the station; consequently, SIGIR could not determine the reason the station was not operational on the day of the site visit. Further, the assessment team could not determine the post-turnover equipment operations and maintenance management and facility/building maintenance practices by the Directorate of Ninewa Water personnel.

USACE documentation confirmed that contract provisions were met and that the Bartilla Booster Pump Station was operational at the time of turnover to the Directorate of Ninewa Water. The documentation also showed that the contractor and the U.S. government performed adequate quality management oversight, which enforced contract provisions and ensured construction quality and completeness.

## Recommendations

SIGIR recommended that the Commander, Gulf Region North, send representatives to visit the site when security situations become more stable to determine why the booster pump station was not operational on 19 September 2007.

## **Management Comments**

The Commander, Gulf Region Division concurred with the recommendation agreeing to have Gulf Region North representatives visit the site when security conditions warrant. SIGIR appreciates the prompt response from GRD and agreed with the suggested corrective action. See Appendix D for the complete text of the management comments.

## **Appendix A. Scope and Methodology**

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We performed this project assessment from September through October 2007 in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector.

In performing this Project Assessment we:

- Reviewed contract documentation to include the following: Contract, Contract documentation, and Statements of Work;
- Reviewed the design package (drawings and specifications), quality control reports, quality assurance reports, construction progress photos, final situation report, and invoices; and
- Conducted an on-site assessment on 19 September 2007 and documented the results of our assessment in Mosul, Iraq.

## **Appendix B. Acronyms**

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GRN	Gulf Region North
m	Meter
m <sup>3</sup> /hour	Cubic meters per hour
SIGIR	Special Inspector General for Iraq Reconstruction
SOW	Statement of Work
USACE	United States Army Corps of Engineers

## **Appendix C. Report Distribution**

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### **Department of State**

Secretary of State

Senior Advisor to the Secretary and Coordinator for Iraq

Director of U.S. Foreign Assistance/Administrator, U.S. Agency for  
International Development

Director, Office of Iraq Reconstruction

Assistant Secretary for Resource Management/Chief Financial Officer,  
Bureau of Resource Management

U.S. Ambassador to Iraq

Director, Iraq Transition Assistance Office

Mission Director-Iraq, U.S. Agency for International Development

Inspector General, Department of State

### **Department of Defense**

Secretary of Defense

Deputy Secretary of Defense

Under Secretary of Defense (Comptroller)/Chief Financial Officer

Deputy Chief Financial Officer

Deputy Comptroller (Program/Budget)

Deputy Assistant Secretary of Defense-Middle East, Office of Policy/International  
Security Affairs

Inspector General, Department of Defense

Director, Defense Contract Audit Agency

Director, Defense Finance and Accounting Service

Director, Defense Contract Management Agency

### **Department of the Army**

Assistant Secretary of the Army for Acquisition, Logistics, and Technology

Principal Deputy to the Assistant Secretary of the Army for Acquisition,  
Logistics, and Technology

Deputy Assistant Secretary of the Army (Policy and Procurement)

Commanding General, Joint Contracting Command-Iraq/Afghanistan

Assistant Secretary of the Army for Financial Management and Comptroller

Chief of Engineers and Commander, U.S. Army Corps of Engineers

Commanding General, Gulf Region Division

Chief Financial Officer, U.S. Army Corps of Engineers

Auditor General of the Army

### **U.S. Central Command**

Commanding General, Multi-National Force-Iraq

Commanding General, Multi-National Corps-Iraq

Commanding General, Multi-National Security Transition Command-Iraq

Commander, Joint Area Support Group-Central

## **Other Federal Government Organizations**

Director, Office of Management and Budget  
Comptroller General of the United States  
Inspector General, Department of the Treasury  
Inspector General, Department of Commerce  
Inspector General, Department of Health and Human Services  
Inspector General, U.S. Agency for International Development  
President, Overseas Private Investment Corporation  
President, U.S. Institute for Peace

## **Congressional Committees and Subcommittees, Chairman and Ranking Minority Member**

### **U.S. Senate**

Senate Committee on Appropriations  
    Subcommittee on Defense  
    Subcommittee on State, Foreign Operations, and Related Programs  
Senate Committee on Armed Services  
Senate Committee on Foreign Relations  
    Subcommittee on International Development and Foreign Assistance, Economic Affairs, and International Environmental Protection  
    Subcommittee on International Operations and Organizations, Democracy and Human Rights  
    Subcommittee on Near Eastern and South and Central Asian Affairs  
Senate Committee on Homeland Security and Governmental Affairs  
    Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security  
    Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia  
Permanent Subcommittee on Investigations

### **U.S. House of Representatives**

House Committee on Appropriations  
    Subcommittee on Defense  
    Subcommittee on State, Foreign Operations, and Related Programs  
House Committee on Armed Services  
    Subcommittee on Oversight and Investigations  
House Committee on Oversight and Government Reform  
    Subcommittee on Government Management, Organization, and Procurement  
    Subcommittee on National Security and Foreign Affairs  
House Committee on Foreign Affairs  
    Subcommittee on International Organizations, Human Rights, and Oversight  
    Subcommittee on the Middle East and South Asia

## Appendix D. Management Comments

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REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
GULF REGION DIVISION  
BAGHDAD, IRAQ  
APO AE 09348

CEGRD-CG

8 October 2007

MEMORANDUM FOR Special Inspector General for Iraq Reconstruction, US Embassy Annex,  
M-202, Old Presidential Palace, APO AE 09316

SUBJECT: Draft SIGIR Project Assessment Report – Bartilla Booster Pump Station Repair  
(SIGIR-PA-07-109)

1. This memorandum provides the U.S. Army Corps of Engineers, Gulf Region Division response to the subject draft assessment report.
2. The Gulf Region Division reviewed the draft report and concurs with the recommendation. Thank you for the opportunity to provide our written comments for incorporation in the final report.
3. If you have any questions, please contact Mr. Milton Naumann at (540) 665-5021 or his email [milton.l.naumann@usace.army.mil](mailto:milton.l.naumann@usace.army.mil).

Enc



MICHAEL J. WALSH  
Brigadier General, USA  
Commanding



## Appendix D. Management Comments

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### COMMAND REPLY

#### **Draft SIGIR Project Assessment Report – Bartilla Booster Pump Station Repair (SIGIR-PA-07-109)**

##### **Recommendation and Command Comments**

Recommendation 1. We recommend that the Commander, Gulf Region North, have representatives visit the site when security situations become more stable to determine why the booster pump station was not in operation on 19 September 2007.

Action Taken. Concur. GRD concurs with the recommendation in the draft report for the site visit. GRN will schedule a Reconstruction Liaison Team (RLT) mission with an interpreter to visit the site and report on the situation. The site visit is contingent upon security risks, at the time of the site visit, as determined by GRN security manager. However, the target date is NLT 1 November 2007.

Enclosure

## **Appendix E. Project Assessment Team Members**

The Office of the Assistant Inspector General for Inspections, Office of the Special Inspector General for Iraq Reconstruction, prepared this report. The principal staff members who contributed to the report were:

Angelina Johnston

Yogin Rawal, P.E.